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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,529

09/30/2005

Arto Koponen

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01/12/2010

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EXAMINER

STRIMBU, GREGORY J

ART UNIT

PAPER NUMBER

3634

MAIL DATE

DELIVERY MODE

01/12/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,529	Applicant(s) KOPONEN, ARTO	
	Examiner Gregory J. Strimbu	Art Unit 3634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/30/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: U_{PSV1} and U_{PSV2}. in figure 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

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The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the legal phraseology "means" on line 5 should be avoided. On lines 5-6, "which have at least substantially identical characteristic curves" is confusing since it is unclear what the characteristic curves are identical to. On line 7, "on the turning angle" is confusing since it is unclear what the applicant is attempting to set forth. Correction is required. See MPEP § 608.01(b).

The title of the invention is objected to because "ARRANGEMENTIN A SWING DOOR APPARATUS" is grammatically awkward and confusing.

Claim Rejections - 35 USC § 112

Claims 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Recitations such as "the operating shaft" on line 4 of claim 13 render the claims indefinite because it is unclear whether or not the applicant is referring to the operation shaft set forth above. Recitations such as "movement of the swing door" on lines 4-5 of claim 13 render the claims indefinite because it is unclear whether or not the applicant is referring to the movement of the swing door set forth above. Recitations such as "the respective characteristics curves" on line 2 of claim 14 render the claims indefinite because they lack antecedent basis. Recitations such as "is arranged to select each

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time the potentiometer to be used for the detection of door position” on lines 4-5 of claim 15 render the claims indefinite because it is unclear what the applicant is attempting to set forth. Recitations such as “the position detecting” on line 6 of claim 15 render the claims indefinite because they lack antecedent basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucher (US 2434248) in view of Callahan (US 5201380). Mucher discloses a swing door apparatus for controlling movement of a swing door, the swing door apparatus comprising an operation shaft 8 for connection to the swing door whereby the operating shaft turns in accordance with movement of the swing door, a common potentiometer shaft 9 coupled to the operation shaft 8 whereby the potentiometer shaft turns in accordance with turning movement of the operation shaft, and first and second potentiometers 5 and 6 coupled with the common potentiometer shaft 9. Mucher is silent concerning the characteristic curves of the potentiometers.

However, Callahan discloses first 36 and second 38 potentiometers having at least substantially identical characteristic curves as shown in figure 2 and being arranged in conjunction with the common potentiometer shaft so that the respective

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characteristic curves are shifted in phase with respect to one another as shown in figure 2.

It would have been obvious to one of ordinary skill in the art to provide the potentiometers of Mucher, with characteristics, as taught by Callahan, to ensure that a voltage output from the potentiometers is always available. See column 4, lines 63-68.

Claims 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Longoria (US 5018304) in view of Callahan (US 5201380). Longoria discloses a swing door apparatus 11 for controlling movement of a swing door 13, the swing door apparatus comprising an operation shaft 47 for connection to the swing door whereby the operating shaft turns in accordance with movement of the swing door, a common sensor shaft 49 coupled to the operation shaft 47 whereby the sensor shaft 49 turns in accordance with turning movement of the operation shaft 47, and a sensor 61 coupled with the common sensor shaft 49;

wherein the common potentiometer shaft 49 is mounted to a drive wheel (not shown, but see column 3, lines 16-17) which is mechanically coupled to said operation shaft 47 for turning the common potentiometer shaft (claim 16);

an electric motor 39 coupled drivingly to said operation shaft 47 and a power source 73 for supplying power to the electric motor, and wherein said sensor 61 receives power from said power source (claim 18). Longoria is silent concerning potentiometers.

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However, Callahan discloses a control apparatus for controlling a motor 14 wherein first 36 and second 38 potentiometers coupled with a common potentiometer shaft 20, the first 36 and second 38 potentiometers having at least substantially identical characteristic curves as shown in figure 2 and being arranged in conjunction with the common potentiometer shaft so that the respective characteristic curves are shifted in phase with respect to one another as shown in figure 2;

wherein the respective characteristic curves are shifted in phase with respect to one another by substantially 180° as set forth in column 4, lines 51-55 (claim 14);

wherein the characteristic curves of the potentiometers each include a linear range as shown in figure 2 and the apparatus comprises a control unit 50 which is arranged to select each time the potentiometer to be used for the detection of door position so that the position detecting is performed within the linear range of the selected potentiometer as set forth in column 5, line 67 to column 6, line 1 and figure 3A (claim 15);

It would have been obvious to one of ordinary skill in the art to provide Longoria with a sensor system, as taught by Callahan, to provide smooth (column 5, lines 3-4) and accurately control the movement of the door.

Claims 13, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Longoria in view of Callahan. Longoria discloses a swing door apparatus 11 for controlling movement of a swing door 13, the swing door apparatus comprising an operation shaft 47 for connection to the swing door whereby the operating shaft turns in

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accordance with movement of the swing door, a common sensor shaft (not numbered, but shown in figure 2 extending vertically from the sensor 61) coupled to the operation shaft 47 whereby the sensor shaft turns in accordance with turning movement of the operation shaft 47, and a sensor 61 coupled with the common sensor shaft;

wherein the common potentiometer shaft 49 is mounted to a drive wheel (not numbered, but shown in figure 2 engaged with the chain 63) which is mechanically coupled via the chain 63 to said operation shaft 47 for turning the common potentiometer shaft (claim 16);

an electric motor 39 coupled drivingly to said operation shaft 47 and a power source 73 for supplying power to the electric motor, and wherein said sensor 61 receives power from said power source (claim 18). Longoria is silent concerning potentiometers.

However, Callahan discloses a control apparatus for controlling a motor 14 wherein first 36 and second 38 potentiometers coupled with a common potentiometer shaft 20, the first 36 and second 38 potentiometers having at least substantially identical characteristic curves as shown in figure 2 and being arranged in conjunction with the common potentiometer shaft so that the respective characteristic curves are shifted in phase with respect to one another as shown in figure 2.

It would have been obvious to one of ordinary skill in the art to provide Longoria with a sensor system, as taught by Callahan, to provide smooth (column 5, lines 3-4) and accurately control the movement of the door.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Longoria in view of Callahan as applied to claims 13, 16 and 18 above, and further in view of Holley (US 3731171). Holley, in figure 3, discloses a potentiometer 44 having a shaft (not numbered, but shown in figure 3) and a drive wheel 52 attached to said shaft, wherein said drive wheel is a gear 52 that is in meshing engagement with a gear 50 attached to an operation shaft 30.

It would have been obvious to one of ordinary skill in the art to replace the chain drive 63 of Longoria, as modified above, with a meshing gear system, as taught by Holley, to simplify the construction of the swing door apparatus and reduce the cost of manufacturing the swing door apparatus.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Longoria in view of Callahan as applied to claims 13-16 and 18 above, and further in view of Mucher (US 2434248). Mucher discloses a potentiometer comprising a body structure 5 to which the potentiometers are attached, and wherein each potentiometer has a slider member 12 connected to a potentiometer shaft 8 for turning therewith.

It would have been obvious to one of ordinary skill in the art to provide Longoria, as modified above, with a body structure and slider member, as taught by Mucher, to increase the ruggedness of the potentiometers (see column 1, lines 29-32),

Response to Arguments

Applicant's arguments filed October 16, 2009 have been fully considered but they are moot in view of the new grounds of rejection.

Conclusion

THIS ACTION IS NOT MADE FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Strimbu whose telephone number is 571-272-6836. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katherine Mitchell can be reached on 571-272-7069. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory J. Strimbu/
Primary Examiner, Art Unit 3634